

WE CLAIM:

1. A stent introducer comprising: a sheath made from a flexible plastic material, said sheath comprising an outer surface and an inner surface, said sheath further having a slot extending through a wall thereof and extending along an entire length of said sheath, wherein said sheath is adapted to be inserted through a hemostatic valve, said outer surface thereby engaging and opening said hemostatic valve and said inner surface providing an open passageway through which a stented catheter is passed to minimize contact between a stent thereon and said hemostatic valve.

2. The stent introducer according to claim 1, further comprising a flange disposed at a proximal end, said flange comprising an outer periphery larger than an opening of said hemostatic valve thereby preventing said proximal end from passing through said hemostatic valve, said flange further comprising a beveled inner surface thereby providing a funnel guideway for said stented catheter.

3. The stent introducer according to claim 1, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel.

4. The stent introducer according to claim 1, wherein said inner surface of said sheath forms a substantially round cross-section in a free state.

5. The stent introducer according to claim 1, wherein said inner surface of said sheath forms two substantially half-round cross-sections in a free state, said two half-round cross-sections being connected to each other at one side and said two half-round cross-sections defining said slot at another side, said slot being open in said free state.

6. The stent introducer according to claim 1, wherein said sheath comprises a hinge connecting two adjacent portions of said sheath together.

7. The stent introducer according to claim 6, wherein said hinge comprises a section of said sheath formed from a thinner cross-section of said flexible plastic material than said two adjacent portions.

8. The stent introducer according to claim 1, wherein a width of said slot is less than a diameter of said stented catheter.

9. The stent introducer according to claim 1, wherein a width of said slot is less than fifty percent of a diameter of said stented catheter.

10. The stent introducer according to claim 1, wherein said slot is substantially closed in a free state.

11. The stent introducer according to claim 1, wherein said sheath comprises a hinge connecting two adjacent portions of said sheath together and a width of said slot is greater than a diameter of said stented catheter.

12. The stent introducer according to claim 1, further comprising a flange disposed at a proximal end, said flange comprising an outer periphery larger than an opening of said hemostatic valve thereby preventing said proximal end from passing through said hemostatic valve, said flange further comprising a beveled inner surface thereby providing a funnel guideway for said stented catheter; wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel.

13. The stent introducer according to claim 12, wherein a width of said slot is less than a diameter of said stented catheter.

14. The stent introducer according to claim 1, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; and a width of said slot is less than a diameter of said stented catheter.

15. The stent introducer according to claim 14, wherein said sheath comprises a hinge connecting two adjacent portions of said sheath together.

16. The stent introducer according to claim 1, wherein said inner surface of said sheath forms two substantially half-round cross-sections in a free state, said two half-round cross-sections being connected to each other at one side and said two half-round cross-sections defining said slot at another side, said slot being open in said free state; and said sheath comprises a hinge connecting said two half-round cross-sections together.

17. The stent introducer according to claim 16, further comprising a flange disposed at a proximal end, said flange comprising an outer periphery larger than an opening of said hemostatic valve thereby preventing said proximal end from passing through said hemostatic valve, said flange further comprising a beveled inner surface thereby providing a funnel guideway for said stented catheter; wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; and said hinge comprises a section of said sheath formed from a thinner cross-section of said flexible plastic material than said two half-round cross-sections.

18. The stent introducer according to claim 1, wherein said inner surface of said sheath forms a substantially round cross-section in a free state, and wherein said slot is substantially closed in a free state.

19. The stent introducer according to claim 1, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; said sheath comprises a hinge connecting two adjacent portions of said sheath together and a width of said slot is greater than a diameter of said

stented catheter; and said hinge comprises a section of said sheath formed from a thinner cross-section of said flexible plastic material than said two adjacent portions.

20. The stent introducer according to claim 1, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; and said sheath comprises a hinge connecting two adjacent portions of said sheath together.

21. A stent introducer comprising: a beveled distal end, a flanged proximal end, a sheath extending between said beveled distal end and said flanged proximal end, said sheath being made from a flexible plastic material and comprising an outer surface and an inner surface, and a slot extending through a wall and along an entire length thereof, wherein said sheath is adapted to be inserted into a hemostatic valve, said outer surface thereby engaging and opening said hemostatic valve and said inner surface thereby providing an open passageway through which a stented catheter is passed to minimize contact between a stent thereon and said hemostatic valve.

22. A introducer comprising: a sheath made from a flexible plastic material, said sheath comprising an outer surface and an inner surface, said sheath further having a slot extending through a wall thereof and extending along an entire length of said sheath, wherein said sheath is adapted to be inserted through a hemostatic valve, said outer surface thereby engaging and opening said hemostatic valve and said inner surface providing an open passageway through which a endovascular medical instrument is passed to minimize contact between said endovascular medical instrument and said hemostatic valve.

23. The introducer according to claim 22, further comprising a flange disposed at a proximal end, said flange comprising an outer periphery larger than an opening of said hemostatic valve thereby preventing said proximal

end from passing through said hemostatic valve, said flange further comprising a beveled inner surface thereby providing a funnel guideway for said endovascular medical instrument.

24. The introducer according to claim 22, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel.

25. The introducer according to claim 22, wherein said inner surface of said sheath forms a substantially round cross-section in a free state.

26. The introducer according to claim 22, wherein said inner surface of said sheath forms two substantially half-round cross-sections in a free state, said two half-round cross-sections being connected to each other at one side and said two half-round cross-sections defining said slot at another side, said slot being open in said free state.

27. The introducer according to claim 22, wherein said sheath comprises a hinge connecting two adjacent portions of said sheath together.

28. The introducer according to claim 27, wherein said hinge comprises a section of said sheath formed from a thinner cross-section of said flexible plastic material than said two adjacent portions.

29. The introducer according to claim 22, wherein a width of said slot is less than a diameter of said endovascular medical instrument.

30. The introducer according to claim 22, wherein a width of said slot is less than fifty percent of a diameter of said endovascular medical instrument.

31. The introducer according to claim 22, wherein said slot is substantially closed in a free state.

32. The introducer according to claim 22, wherein said sheath comprises a hinge connecting two adjacent portions of said sheath together and a width of said slot is greater than a diameter of said endovascular medical instrument.

33. The introducer according to claim 22, further comprising a flange disposed at a proximal end, said flange comprising an outer periphery larger than an opening of said hemostatic valve thereby preventing said proximal end from passing through said hemostatic valve, said flange further comprising a beveled inner surface thereby providing a funnel guideway for said endovascular medical instrument; wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel.

34. The introducer according to claim 33, wherein a width of said slot is less than a diameter of said endovascular medical instrument.

35. The introducer according to claim 22, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; and a width of said slot is less than a diameter of said endovascular medical instrument.

36. The introducer according to claim 35, wherein said sheath comprises a hinge connecting two adjacent portions of said sheath together.

37. The introducer according to claim 22, wherein said inner surface of said sheath forms two substantially half-round cross-sections in a free state, said two half-round cross-sections being connected to each other at one side and said two half-round cross-sections defining said slot at another

side, said slot being open in said free state; and said sheath comprises a hinge connecting said two half-round cross-sections together.

38. The introducer according to claim 37, further comprising a flange disposed at a proximal end, said flange comprising an outer periphery larger than an opening of said hemostatic valve thereby preventing said proximal end from passing through said hemostatic valve, said flange further comprising a beveled inner surface thereby providing a funnel guideway for said endovascular medical instrument; wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; and said hinge comprises a section of said sheath formed from a thinner cross-section of said flexible plastic material than said two half-round cross-sections.

39. The introducer according to claim 22, wherein said inner surface of said sheath forms a substantially round cross-section in a free state, and wherein said slot is substantially closed in a free state.

40. The introducer according to claim 22, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; said sheath comprises a hinge connecting two adjacent portions of said sheath together and a width of said slot is greater than a diameter of said endovascular medical instrument; and said hinge comprises a section of said sheath formed from a thinner cross-section of said flexible plastic material than said two adjacent portions.

41. The introducer according to claim 22, wherein said sheath comprises a beveled distal end, said slot being disposed at a heel of said bevel; and said sheath comprises a hinge connecting two adjacent portions of said sheath together.